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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/009,733	05/01/2002	Jean-Jacques Braconnier	022701-978	6028
21839	7590	06/29/2004	EXAMINER	
BURNS DOANE SWECKER & MATHIS L L P POST OFFICE BOX 1404 ALEXANDRIA, VA 22313-1404			METZMAIER, DANIEL S	
		ART UNIT	PAPER NUMBER	
		1712		

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

J.C.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/009,733	BRACONNIER, JEAN-JACQUES
	Examiner	Art Unit
	Daniel S. Metzmaier	1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM  
 THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 30 April, 2004 & 28 May 2004.
- 2a) This action is **FINAL**.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,2,4,5,11-14,16-19 and 25-28 is/are rejected.
- 7) Claim(s) 3,6-10,15 and 20-24 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

## **DETAILED ACTION**

Claims 1-28 are pending.

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 30, 2004 has been entered.

### ***Claim Objections***

2. Claim 18 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 14 contains the same limitation.

### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 19 and 28 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. It is unclear where the originally filed disclosure provides support for the particle size range now claimed as "at most 200 nm". While the specification provides for the range of 5 to 200 nm, it does not provide basis for "up to 200 nm".

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Line 3 of claim 20 contains the term "lanthanum". Said claim is a new claim and would be printed as set forth. Without the term "lanthanum" the claim contains idiomatic English. It is unclear what is applicants' intent. Claims 22 and 23 are included as dependent on claim 20 and do not correct the indefinite limitation.

#### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 14, 16-19 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber

"Coatings" (of record). Boakye et al (page 54, lines 10-19, particularly lines 16-19) disclose lanthanum phosphate sols employing nitric acid in addition to the lanthanum phosphate. The pH would have been expected to have been inherent based on the buffering action of the diammonium phosphate. The particle characterization of claim 17 would have been expected to have been inherent as a known characterization of lanthanide phosphate particles. Attention is further directed to Figure 5a of Boakye et al, wherein the coating thickness is less than the applicants' maximum particles limitation.

The orthophosphates are the most highly hydrated form in contrast to the less hydrate forms, such as metaphosphates. Since the materials are made by related processes and said particles are peptized with nitric acid, a strong mineral acid, said particles would have been expected to have been orthophosphates due to the aqueous process. Furthermore, Boakye et al characterizes the structure as  $\text{LaPO}_4$ , which have been interpreted as lanthanum orthophosphate.

Since the sol compositions may function without modification as a polishing agent, anti-corrosion agent or a anti-UV agent, claims 25-27 are not deemed to distinguish the particulate sols made in the Boakye et al reference since the function would have been inherent.

#### ***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings" (of record).

Boakye et al discloses sols as set forth in the above anticipation rejection.

To the extent the Boakye et al reference differs from claim 16 in the pH, some variation in the pH is within the skill level of one having ordinary skill in the art at the time of applicants' invention for the advantage of stabilizing the compositions against solubilization at highly acidic environments and the complete conversion to hydrous oxides in highly alkaline environments.

12. Claims 1-2, 4-5, 11-13 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings" (of record), as applied to claims 14-17 above, and further in view of Hunt et al, US 5,858,465. Boakye et al (page 54, lines 10-19, particularly lines 16-19)

disclose lanthanum phosphate sols employing nitric acid in addition to the lanthanum phosphate as set forth in the above anticipation rejection.

Boakye et al differs from claims 1-5 and 12-13 in the disclosure of lanthanum phosphates rather than the claims cerium phosphates.

Hunt et al (column 7, lines 35-55) discloses the use of lanthanum and/or cerium phosphates in fiber coatings and their advantageous anti-corrosion properties and refractory properties.

These references are combinable because they teach lanthanide phosphates. It would have been obvious to one of ordinary skilled in the art at the time of applicants' invention to employ cerium phosphate in the compositions of Boakye et al as an obvious functional equivalent to the lanthanum phosphate as clearly recognized in the art in fiber coatings for their advantageous anti-corrosion properties and refractory properties. The similar properties of lanthanum and cerium are well within the ordinary skilled in the art at the time of applicants' invention as is evidenced by their disclosed use together and the known difficulties in separating them.

13. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boakye et al, "Porous Aluminum Oxide and Lanthanum Phosphate Fiber Coatings" (of record), as applied to claims 1-2, 4-5 and 11-13 and 14, 16-19 and 25-27 above, and further in view of Shoji et al. XP-002129788. While the foregoing combination of Boakye et al doesn't disclose the use of their sols in or as anti-corrosion agent compositions, it would further have been obvious to one skilled in the art at the time applicant's invention was made to use the sols of Boakye et al, in or as a convenient

vehicle for applying corrosion-inhibiting coatings of La and/or Ce phosphate to metal sheets as disclosed by Shoji et al.

***Allowable Subject Matter***

14. Claims 3, 6-10, 15 and 20-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

15. Applicant's arguments filed April 30, 2004 have been fully considered but they are not persuasive.

16. Applicants (page 11) assert that the nitric acid deleted from claims 3 and 15 have a  $pK_a$  of less than 3 and therefore the claims are now free of the prior art. The record reflects by the original claim drafting (see original claims 1-3) that applicants define nitric acid as having a  $pK_a$  of at least 3. Furthermore, claim 1 does not define the  $pK_a$  of the acid other than phosphoric acid. Applicants have not supported their argument and it contradicts the facts of record.

Furthermore, the conjugate acid as ammonium cation resulting from the dissolution of the dominium hydrogen phosphate meets the broad limitation of an acid having a  $pK_a$  of at least 3. Said conjugate acid has a  $pK_a$  of about 9. Also, applicants' (page 11 and 12) arguments regarding the claim to othophosphates has not been shown to be distinct from the prior art relied. It is suggested applicants incorporate said acid species into the independent claims.

17. Applicants assert the secondary references do not overcome the alleged deficiencies of the primary reference. The secondary references are cited as set forth above. It is not agreed the primary reference has any deficiencies as alleged.

18. Applicant's arguments with respect to the remaining claims have been considered but are moot in view of the new ground(s) of rejection or said rejection has been withdrawn.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel S. Metzmaier whose telephone number is (703) 308-0451. The examiner can normally be reached on 9:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Daniel S. Metzmaier  
Primary Examiner  
Art Unit 1712

DSM